amended to recite a method of manufacturing an electronic device comprising the steps of (a) forming on an underlying layer an insulating film made from one of an oxide film, a nitride film, an oxide nitride film, an organic film and an organic-inorganic hybrid film; (b) forming a resist pattern on the insulating film; (c) forming an insulating film pattern by etching the insulating film with the resist pattern used as a mask; (d) conducting a plasma treatment on exposed portions of the underlying layer and the insulating film pattern without removing the resist pattern after step (c) and (e) forming a pattern for the underlying layer by etching the underlying layer with the resist pattern and the insulating film pattern used as a mask after step (d). That is, in accordance with the present invention, since the plasma treatment is conducted on exposed portions of the underlying layer and the insulating film pattern without removing the resist pattern in step (d), etching foreign matters generated in the insulating film or underlying layer when forming the insulating film pattern the step (c) can be removed. Thereafter, since the pattern for the underlying layer is formed by etching the underlying layer with the resist pattern and the insulating film pattern used as a mask, the underlying layer pattern can be formed without being affected by the etching foreign matters and hence, with no pattern defect such as an increase in the size of pattern damage.

Additionally, since the resist is retained during the plasma treatment, etching can be performed using both the resist and the insulating film in step (d). In order to form a fine pattern for the underlying layer, the insulating film to function as a mask must be thin. Hence, since the resist is retained on the insulating film, the resist can also function as a mask and a fine pattern can be accurately formed.

With respect to the teachings of Lee et al., this reference, as shown in Figs. 5-7, discloses forming an insulating film 32 on a substrate 30 (underlying layer), forming resist patterns 34a, 34b on the insulating film 32, etching the insulating film 32 with an etching plasma containing a fluorine, and using the resist patterns 34a, 34b as a mask and thereafter removing the resist 34a, 34b and fluoropolymer residue layers 38a, 38b using a plasma containing fluorine. As the Examiner can readily appreciate, Lee et al. fails to disclose or remotely suggest step (e) as recited in accordance with Applicants' claimed invention. Specifically, the Lee et al. reference fails to disclose or remotely suggest forming a pattern for the underlying layer by etching the underlying layer with the resist pattern and the insulating film pattern used as mask after step (d). Specifically, Lee fails to disclose a step which corresponds to step (e) of the present invention such as patterning of the substrate 30 (underlying layer) using the insulating films 32a, 32b and the resist patterns 34a, 34b as a mask. Lee et al. fails to

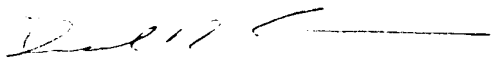
[illegible] a fine pattern of the underlying layer with no defect due to etching foreign matters cannot be achieved as is achieved in accordance with Applicants' claimed invention.

Therefore, in that the patent to Lee et al. fails to disclose all those steps presently set forth in accordance with Applicants' claimed invention, it is respectfully submitted that independent claim 1, as well as those claims which depend therefrom, are in condition for allowance. Presently, it is noted that only claim 2 has been acted on by the Examiner. However, in that claim 1 is now believed to be in proper condition for allowance, and claims 2, 3, 4, 5 and 6 are either directly or indirectly dependent thereon, it is respectfully submitted that each of dependent claims 2-6 are now in proper condition for allowance given the allowability of independent claim 1 from which they depend.

Therefore, in view of the foregoing it is respectfully requested that the rejection of record be reconsidered and withdrawn by the Examiner, that claims 1-6 be allowed and that the application be passed to issue.

Should the Examiner believe a conference would be of benefit in expediting the prosecution of the instant application, he is hereby invited to telephone counsel to arrange such a conference.

Respectfully submitted,



Donald R. Studebaker
Reg. No. 32,815

Nixon Peabody LLP
8180 Greensboro Drive, Suite 800
McLean, Virginia 22102
(703) 770-9300